CURRICULUM VITAE

NAME:	Michael MAKKAI
DATE OF BIRTH:	June 24, 1939
PLACE OF BIRTH:	Budapest, Hungary
MARITAL STATUS:	Married, I child
CITIZENSHIP:	Canadian

EDUCATION AND DEGREES:

1962   (Equivalent of) M.A. at Eotvos Lorand University of Sciences, Budapest, Hungary.

1964-65   work towards Ph.D. under Professor A. Mostowski, Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Poland.

1966   Ph.D. in Mathematics, Eotvos Lorand University of Sciences, Budapest. Speciality: Mathematical Logic.

1969   Candidate's Degree in Mathematics, awarded by the Hungarian Academy of Sciences.

ACADEMIC CAREER:

1962-71   Assistant Researcher; from 1965, Research Associate of the Mathematical Research Institute of the Hungarian Academy of Sciences, Budapest.

1966-67   On leave from above, Lecturer at the University of California, Berkeley, California.
1971-73   Visiting Associate Professor; from 1972, Associate Professor, at the University of Manitoba, Winnipeg, Manitoba.

1973-74   Research Associate, at the Centre des Recherches Mathématiques, Université de Montréal, Montreal.

1974-78   Visiting Associate Professor; from 1975, Associate Professor, at Department of Mathematics, McGill University, Montreal.

1975-76   On leave from above, Visiting Associate Professor at the University of California, Los Angeles, California.

1978-Present   Professor, Department of Mathematics, McGill University, Montreal.

1980-81   Research Fellow, The Institute for Advanced Studies, The Hebrew University of Jerusalem, Jerusalem, Israel.
Summer 1988 (May-August): Lady Davis Visiting Professor (Jerusalem)

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| Fall 1989 | (September-December): Visiting Scientist, Mathematical Institute, Hungarian Academy of Sciences. |

OFFICES HELD:

1981-84	NSERC: Member of Grant Selection Committee, Pure and Applied Mathematics
1991-92	NSERC: Member of Grant Selection Committee, Pure and Applied Mathematics
1983-84	Chairman of same Committee
1980-84	Consulting Editor of the Journal of Symbolic Logic
1985-93	Review Editor of the Journal of Symbolic Logic
1983-85	Member of the Executive Committee of the Association for Symbolic Logic
1987-91	Assessor of the Division of Logic, Methodology and Philosophy of Science, International Union of History and Philosophy of Science
1992-	Member of the Editorial Board of Archivum Mathematicum (Brno, The Czech Republic)
1994-	Member of the International Advisory Board of Mathematica Japonica (Japanese Association of Mathematical Sciences)
1995	Member of the Board of Directors, Canadian Mathematical Society

HONOURS:

1995	Foreign Member of the Hungarian Academy of Sciences
2000	Peter Redpath Chair of Pure Mathematics
2002	David Thompson Award for Graduate Teaching and Supervision (McGill)

PUBLICATIONS:

I.   Uber die transfinite Induktion in zahlentheoretischen Formalismen, Proceedings of the Colloquium on the Foundations of Mathematics, Mathematical Machines and their Applications, Tihany, ll-15 September 1962, Akadémia KiadO, Budapest, 1965, 39-43, (MR 33 #3010).

2.   On a generalization of a theorem of E.W. Beth, Acta Mathematica Acad. Sci. Hungaricae 15 (1964), 227-235, (MR 28 #5001).

3.   Solution of a problem of G. Gratzer concerning endomorphism semigroups, Acta Mathematica Acad. Sci. Hungaricae 15 (1964), 297-307. (MR 29 #3564).

4.   On PC -classes in the theory of models, Publications on the Mathematical Institute Hung. Acad. Sci. 9, ser. A (1964), 159-194, (MR 30 #1052).

5.   Remarks on my paper "On PC -classes in the theory of models", Publications of the Mathematical Institute Hung. Acad. Sci. 9, ser. A (1964), 601-602, (MR 33 #48).

6.   A compactness result concerning direct products of models, Fundamenta Math. 57 (1965), 313-325, (MR 32 #5512).

7.   Some remarks on set theory X, Studia Scientia um Math. Hung. I (1966), 157-159, (with P. Erdos), (MR 35 #70).

8.   On the model theory of denumerably long formulas with finite strings of quantifiers, Journal of Symbolic Logic 34 (1969), 437-459, (MR 41 #45).

9.   An application of a method of Smullyan to logics on admissible sets, Bull. L'Acad. Polon. Sci. Ser. Sci. Math., Astr. et Phys., 17 (1969), 341-346, (MR 42 #1649).

10.   Structures elementarily equivalent relative to infinitary languages to models of higher power, Acta Math. Acad. Sci. Hungaricae 21, (1970), 283-295, (MR 42 #7486).

11.)   Algebraic Operations on classes of algebras and logical formulas.
)
12.)   (in Hungarian). A Magyar Tudományos Akadémia Matematikai és Fizikai Osztályanak Kozleményei, Budapest, 20 (1971), Part I: 45-83, Part II: 221-275, (MR 44 #50).

13.   Svenonius sentences and Lindstrom's theory on preservation theorems, Fundamenta Math. 73, (1972), 219-233, (MR 47 #3166).

14.   On the lattice of subalgebras of a Boolean algebra, Proc. Amer. Math. Soc. 36 (1972), 87-92 (with G. Gratzer and K.M. Koh), (MR 46 #8928).

15.   A proof of K.A. Baker's finite-base theorem, Algebra Universalis 3 (1973), 174-181, (MR 50 #4444).

16.   Preservation theorems for pseudo-elementary classes, in: Selected problems in Algebra and Logic. Proceedings, dedicated to the memory of A.I. Malcev. Izdat'el'stvo Nauka, Sibirskoe Otdelenie, Novosibirsk, (1973), 161-183l, (in English) (MR 49 #10540).

17. Vaught sentences and Lindstrom's regular relations, in: Cambridge Summer School in Mathematical Logic, Lecture Notes in Mathematics 337, Springer, Berlin (1973), 622-660, (MR 50 #4285).

18. Applications of methods of mathematical logic in Computer Science (in Hungarian), Infelor Kozlemények, Budapest, 4 (1973), 115-165.

19. Global definability theory, Bull. Amer. Math. Soc. 79 (1973), 916-921, (MR 55, #2490).

20. Generalizing Vaught sentences from w to strong confinality w, Fundamenta Math. 82 (1974), 105-119, (MR 53 #5295 a,b).

21. A remark on a paper by J.P. Ressayre, Annals of Math. Logic 7 (1974), 157-162, (MR 50 #12709).

22. Applications of Vaught sentences and the covering theorem, J. Symbolic Logic 41 (1976), 171-187 (with V. Harnik).

23.) Model-theoretical methods in the theory of topoi and related categories,
24.) I. and II. Bulletin de l'Acad. Pol. Sci. Ser. sci. math. astr. phys. 24 (1976), Part I: 379-384, Part II: 385-392 (with G.E. Reyes), (MR 54 #10009 a,b).

25. Review of Chang and Keisler: Model Theory, Bull. Amer. Math. Soc. 82 (1976), 433-446.

26. Universal Horn axiom systems for lattices of submodules, Algebra Universalis 7 (1977), 25-31 (with G. McNulty), (MR 55 #2682).

27. An L_{w1w} complete and consistent theory without models, Proc. Amer. Math. Soc. 62 (1977), 131-133 (with J. Mycielski).

28. An "admissible" generalization of a theorem on countable sets of reals with applications. Annals of Mathematical Logic 11 (1977), 1-30.

29. Admissible sets and infinitary logic, (Chapter A.7 in Handbook of Mathematical Logic, edited by J. Barwise), North Holland, 1977, 233-281.

30. Stationary logic, Annals of Mathematical Logic, 13 (1978), 171-224, (with J. Barwise and M. Kaufmann).

31. New axiomatizations for logics with generalized quantifiers, Israel J. Math. 32 (1979), 257-28l, (with V. Harnik).

32. A tree-argument in infinitary model theory, Proc. Amer. Math. Soc. 67 (1977), 309-314, (with V. Harnik).

33. First order categorical logic, Lecture Notes in Mathematics, Springer-Verlag, No. 611 (with G.E. Reyes). (Reviews: Advances in Mathematics 28 (1978), 178; Bulletin of the AMS, 84 (1978), 1378-1380.)

34. First order categorical logic, La Gazette Sci. Math. Quebec, Vol.2, No. l (1977), 3-16, 41-48.

35. On full embeddings I, Journal of Pure and Applied Algebra, 16 (1980), 183-195.

36.   There are atomic Nadel structures, C.R. Math. Rep. Acad. Sci. Canada, 1 (1979), 157-160.

37.   An example concerning Scott heights, Journal of Symbolic Logic, 46 (1981), 301-318.

38.   The topos of types, in: Logic Year 1979-80, The University of Connecticut, Lecture Notes in Math., No.859, Springer-Verlag (1981), 157-201.

39.   Full continuous embeddings of toposes, Transactions Amer. Math. Soc. 269 (1982), 167-196.

40.   Stone Duality for first order logic, in: Proceedings of the Herbrand Symposium, North-Holland, (1982), 217-232.

41.   A survey of basic stability theory, Israel Journal of Mathematics 49 (1984), 181-238.

42.   A proof of Vaught's conjecture for omega-stable theories, (with S. Shelah and L. Harrington), Israel J. Math. (1984), 259-280.

43.   A Stone-type representation theory for first order logic, in: Applied Category Theory, Contemporary Math. 30 (1984) AMS, 175-243.

44.   Some remarks on papers by Y. Diers and H. Volger on sheaf representation, Abstract No. 84T - 18 - 76, Abstracts AMS 5 (1984), No. 1, 136.

45.   An exposition of Shelah's 'Main Gap', (with L. Harrington) Notre Dame Journal for Formal Logic 26 (1985), 139-177.

46.   Ultraproducts and categorical logic, in: Methods in Mathematical Logic, Springer LNM 1130 (1985), 222-309.

47.   Some results on locally finitely presentable categories (with Andrew Pitts), Trans. AMS 299 (1987), 473-496.

48.   On representations of Grothendieck toposes (with M. Barr), Canadian J. Math. 39 (1987), 168-221.

49.   Stone duality for first order logic, Advances in Mathematics 65 (1987), 97-170.

50.   Accessible categories: The foundations of categorical model theory (with R. Paré). Contemporary Mathematics Series 104, Amer. Math. Soc., 1989. Research monograph, viii + 176 pages.

51.   Strong conceptual completeness for first order logic, Annals of Pure and Applied Logic 40 (1988), 167-215.

52.   Categoricity of theories in L_{kw}, with k a compact cardinal (with S. Shelah), Annals of Pure and Applied Logic 47 (1990), 41-97.

53.   A theorem on Barr-exact categories, with an infinitary generalization, Annals of Pure and Applied Logic 47 (1990), 225-268.

54. The fibrational formulation of intuitionistic predicate calculus I. Completeness according to Gödel, Kripke and Läuchli, Part 1. Notre Dame Journal of Formal Logic 34 (1993), 334-377.

55. The fibrational formulation of intuitionistic predicate calculus I. Completeness according to Gödel, Kripke and Läuchli, Part 2, Notre Dame Journal of Formal Logic 34 (1993), 471-498.

56. Lambek's categorical proof theory, and Läuchli's abstract realizability (with V. Harnik). J. Symbolic Logic, 57 (1992), 200-230.

57. Duality and definability in first order logic. The Memoirs of the A.M.S., Vol.105, No.503 (1993), viii + 106 pages.

58. On Gabbay's proof of the Craig interpolation theorem for intuitionistic logic. Notre Dame J. of Formal Logic, 36 (1995), no. 3, pp. 364-381.

59. Completeness results for intuitionistic and modal logic in a categorical setting (with G.E. Reyes), Annals of Pure and Applied Logic, 72 (1995), 25-101.

60. An algebraic look at propositional logic. AILA Preprint n.18 (1994) (Associazione Italiana di Logica e sue applicazioni).

61. Accessible embeddings and the solution-set condition (with H. Hu). Cahiers de Top. et Géom. Diff., 35 (1994), 99-108.

62. Generalized sketches as a framework for completeness theorems. Part 1. Journal of Pure and Applied Algebra, 115 (1997), 49-97.

63. Generalized sketches as a framework for completeness theorems. Part 2. Journal of Pure and Applied Algebra, 115 (1997), 179-212.

64. Generalized sketches as a framework for completeness theorems. Part 3. Journal of Pure and Applied Algebra, 115 (1997), 241-274.

65. Avoiding the use of the axiom of choice in general category theory. Journal of Pure and Applied Algebra, 108 (1996), pp. 109-173.

66. The beginnings of categorical model theory. Text for an invited talk at the XIXth International Congress of History of Science, Zaragoza, August 22-29, 1993. Submitted to: History and Philosophy of Logic.

67. First order logic with dependent sorts, with applications to category theory. Research Monograph, accepted by: Lecture Notes in Logic, Springer-Verlag, 200 pages.

68. Towards a categorical foundation of mathematics. In: Logic Colloquium '95 (J.A. Makowsky and E.V. Ravve, editors). Lecture Notes in Logic, 11, Springer-Verlag, (1998); 153-190.

69. On structuralism in mathematics. Chapter 3 in: Language, Logic and Concepts. Essays in Memory of John Macnamara. Ed. by R. Jackendoff et al., Cambridge, MA, MIT Press, 1999, pp. 43-66.

70. On weak higher dimensional categories I (with C. Hermida and J. Power). Part 1. Journal of Pure and Applied Algebra 153, 2000, pp. 221-246.

71.   On weak higher dimensional categories I (with C. Hermida and J. Power). Journal of Pure and Applied Algebra 157 (2001), pp.247-277.

72.   On weak higher dimensional categories I (with C. Hermida and J. Power). Journal of Pure and Applied Algebra 166 (2002), pp. 83-104.

73.   Studying repleteness in the category of cpos (with G. Rosolini). 5 pages. Extended abstract, accepted by the MFPS Conference, Pittsburgh, 1997. Electronic Notes in Theoretical Computer Science 6 (1997) URL:http://www.elsevier.nl/locate/entcs/volume6.html.

74.   Weak higher dimensional categories (with C. Hermida and J. Power). 7 pages. Extended abstract, accepted by the LICS Conference, 1998.

75.   On the role of category theory in the foundations of mathematics, in Hungarian. Revised text of inaugural lecture at the Hungarian Academy of Sciences, November 19, 1997; In: Szekfoglalok 1995-1998 (Ed.: F. Glatz), Budapest, Hungarian Academy of Sciences, 1999 Part III, pages 1-28.

76.   Duality for simple omega-categories and disks (with M. Zawadowski). Theory and Application of Categories 8 (2001), pp. 114-243.

77.   The multitopic omega-category of all multitopic omega-categories. Manuscript, September 1999. 67 pages. At: www.math.mcgill.ca/makkai/

78.   On comparing definitions of Aweak n-category@. Manuscript, September 2001, 41 pages. At: www.math.mcgill.ca/makkai/

79.   Multitopic sets are the same as many-to-one computads (with V. Harnik and M. Zawadowski). Preprint, 183 pages. At: www.math.mcgill.ca/makkai/

80. An accessible approach to behavioral pseudometrics (with F. van Breugel, C. Hermida and J. Worrell). Extended abstract. 16 pages. April 2005. For: 32nd ICALP, July 11-15, Lisboa, Portugal.

81. The word problem for computads. 146 pages. May, 2005. At: www.math.mcgill.ca/makkai.

82. Computads and 2-dimensional pasting diagrams. 142 pages. April, 2007. At: www.math.mcgill.ca/makkai.

83. Recursively Defined Metric Spaces without Contraction (with F. van Breugel, C. Hermida and J. Worrell). *Theoretical Computer Science* **380**(1/2): 143-163, June 2007.

84. The category of 3-computads is not Cartesian closed. 6 pages . To appear in *Journal of Pure and Applied Algebra*. (Final acceptance: March 11, 2008.)

85. Computads and Multitopic Sets (with V. Harnik and M. Zawadowski). Submitted to *Journal of Pure and Applied Algebra*. At: www.math.mcgill.ca/makkai.